



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

February 7, 2020

Annette M. Bloomberg  
Regulatory Product Manager  
Bayer Crop Science  
P.O. Box 122014, 2 T.W. Alexander Drive  
Research Triangle Park, NC 27709

Subject: Registration Review Label Mitigation for Metsulfuron-methyl  
Product Name: Streamline Herbicide  
EPA Registration Number: 432-1570  
Application Dates: 9 Sep 2017  
Decision Numbers: 555588

Dear Ms. Bloomberg,

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with Sulfonylurea Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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EPA Reg. No. 432-1570  
Decision No. 555588

If you have any questions about this letter, please contact Srijana Shrestha by phone at 703-305-6471, or via email at [Shrestha.srijana@epa.gov](mailto:Shrestha.srijana@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to be "Linda Arrington", with a stylized flourish at the end.

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

**ACCEPTED**

Feb 07, 2020

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No.

432-1570

**Aminocyclopyrachlor****Metsulfuron-methyl****Group****4****2****Herbicide**

# STREAMLINE<sup>®</sup> HERBICIDE

**DO NOT USE PLANT MATERIAL TREATED WITH STREAMLINE<sup>®</sup> HERBICIDE FOR MULCH OR COMPOST**

Dry Flowable

**For Non-Crop Use**Active Ingredients

By Weight

Aminocyclopyrachlor

6-Amino-5-chloro-2-cyclopropyl-4-pyrimidinecarboxylic acid

39.5%

Metsulfuron-methyl

Methyl 2[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate

12.6%

Other Ingredients

47.9%

TOTAL

100.0%

EPA Reg. No. 432-1570

EPA Est. No.

**Nonrefillable Container****Net:** \_\_\_\_\_

OR

**Refillable Container****Net:** \_\_\_\_\_**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See [Back][Side] Panel for First Aid Instructions and [Leaflet][Booklet] for Complete Precautionary Statements and Directions for Use. (Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.)

**FIRST AID****IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-334-7577 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS****CAUTION**

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

**USER SAFETY RECOMMENDATIONS****USERS SHOULD:** Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

Long-sleeved shirt and long pants.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/ maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely effected from drift and run-off.

**SURFACE WATER ADVISORY**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of metsulfuron methyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hour.

**GROUNDWATER ADVISORY**

Aminocyclopyrachlor has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

Metsulfuron-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

**NON-TARGET ORGANISM ADVISORY**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

**WINDBLOWN SOIL PARTICLES**

STREAMLINE® HERBICIDE has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying STREAMLINE® HERBICIDE if prevailing local conditions may be expected to result in off-site movement.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

STREAMLINE® HERBICIDE must be used only in accordance with directions on this label or in separately published BAYER CROPSOURCE LP labeling.

BAYER CROPSOURCE LP will not be responsible for losses or damages resulting from the use of this product in any manner not specifically instructed by BAYER CROPSOURCE LP. User assumes all risks associated with such non-labeled use.

**PRODUCT INFORMATION**

STREAMLINE® HERBICIDE is a dispersible granule that is mixed in water and applied as a spray. STREAMLINE® HERBICIDE may be applied by aerial or ground equipment for control of broadleaf weeds and woody species, including many terrestrial and riparian invasive and noxious weeds. STREAMLINE® HERBICIDE is registered for general weed and brush control on private, public and military lands as follows: uncultivated non-agricultural areas (such as airports, highway, railroad and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas - non-crop producing (such as farmyards, fuel storage areas, fence rows, non-irrigation ditchbanks, barrier strips, etc.); industrial sites - outdoor (such as lumberyards, pipeline and tank farms, etc.) and natural areas (such as wildlife management areas, wildlife openings, wildlife habitats).

This product may be applied to terrestrial non-crop sites that contain areas of temporary surface water caused by collection

of water, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded, as well as seasonally dry flood deltas. STREAMLINE® HERBICIDE may be applied up to the waters edge. Do not apply directly to water.

STREAMLINE® HERBICIDE provides preemergence and/or postemergence control of the broadleaf weeds, vines and brush species listed in the weeds controlled section of the label. For perennial species on the label, a postemergence application must be used. For best postemergence performance, include an MSO type adjuvant to the spray solution. Excessive wetting of the target plant is not necessary but good spray coverage of the target plant is needed for best results.

STREAMLINE® HERBICIDE is non-corrosive to spray equipment.

Do not apply more than 11.5 ounces of STREAMLINE® HERBICIDE broadcast (0.28 pounds of the active ingredient aminocyclopyrachlor and 0.091 pounds of the active ingredient metsulfuron-methyl) per acre per year.

### **BIOLOGICAL ACTIVITY**

STREAMLINE® HERBICIDE is quickly taken up by the leaves, stems and roots of plants. The effects of STREAMLINE® HERBICIDE may be seen on plants from within a few hours to a few days. The most noticeable symptom is a bending and twisting of stems and leaves. Other advanced symptoms include severe chlorosis, necrosis, stem thickening, growth stunting, leaf crinkling, calloused stems and leaf veins, leaf-cupping, and enlarged roots. Death of treated broadleaf plants may require several more weeks and up to several months for some woody plant species.

STREAMLINE® HERBICIDE is rain-fast at 4 hours after application.

### **IMPORTANT RESTRICTIONS**

- Do not apply this product in areas where the roots of desirable trees and/or shrubs may extend unless injury or loss can be tolerated. Root zone areas of desirable trees or vegetation are affected by local conditions and can extend well beyond the tree canopy.
- Do not apply this product if site-specific characteristics and conditions exist that could contribute to movement and unintended root zone exposure to desirable trees or vegetation unless injury or loss can be tolerated.
- Do not make applications when circumstances favor movement from treatment site.
- Do not apply STREAMLINE® HERBICIDE to roadsides or other non-crop areas during periods of intense rainfall, or where prevailing soils are either saturated with water or of a type through which rainfall will not readily penetrate, as this may result in off-site movement.
- Do not apply or otherwise permit this product or sprays containing this product to come into contact with any non-target crop or desirable vegetation.
- Do not apply in or on dry or water containing irrigation ditches or canals including their outer banks.
- Do not apply through any type of irrigation system.
- Do not contaminate water intended for irrigation. To avoid injury to crops or other desirable vegetation, do not treat or allow spray drift or run-off to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation purposes.
- Treatment of powdery, dry soil and light, sandy soils when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops and desirable vegetation when soil particles are moved by wind or water. Injury to crops or desirable vegetation may result if treated soil is washed, blown or moved onto land used to produce crops or land containing desirable vegetation. Do not apply STREAMLINE® HERBICIDE when these conditions are identified and powdery, dry soil or light or sandy soils are known to be prevalent in the area to be treated.
- Do not apply when the soil is frozen or covered with snow.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Do not use this product in California.
- Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.
- For sites listed in this label, do not apply more than a total of 11.5 ounces of product per acre per year as a result of broadcast, spot or repeat applications.
- Do not graze or feed forage, hay or straw from treated areas to livestock.
- Do not use plant material treated with this product for mulch or compost.
- If non-crop sites treated with STREAMLINE® HERBICIDE are to be converted to a food, feed, or fiber agricultural crop, or to a horticultural crop, do not plant the treated sites for at least one year after the STREAMLINE® HERBICIDE application. A field bioassay must then be completed before planting the desired crop.
- Not for sale, sale into, distribution and/or use in Nassau and Suffolk counties of New York State.

## AERIAL APPLICATIONS

For aerial applications near susceptible crops or other desirable plants, use a drift control additive as recommended by the manufacturer, or apply through a "Microfoil" or "Thru-Valve" boom, or use an equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift control systems may be utilized if drift control is comparable to that obtained with drift control additives or the "Thru-Valve" boom. If a spray thickening agent is used, follow all recommendations and precautions on the product label. Do not use a thickening agent with the "Microfoil" boom or other systems that cannot accommodate thick sprays.

See **Spray Drift Management** Section of this label for additional information.

## IMPORTANT PRECAUTIONS

- Certain species may, in particular, be sensitive to low levels of STREAMLINE® HERBICIDE including but not limited to, conifers (such as Douglas fir, Norway spruce, ponderosa pine and white pine), deciduous trees (such as aspen, Chinese tallow, cottonwood, honey locust, magnolia, poplar species, redbud, silver maple, and willow species), and ornamental shrubs (such as arborvitae, burning bush, crape myrtle, forsythia, hydrangea, ice plant, magnolia, purple plum and yew).
- Injury or loss of desirable trees or vegetation may result if STREAMLINE® HERBICIDE is applied on or near desirable trees or vegetation, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots. Consider site-specific characteristics and conditions that could contribute to unintended root zone exposure to desirable trees or vegetation. Root zone areas of desirable trees or vegetation are affected by local conditions and can extend beyond the tree canopy. If further information is needed regarding root zone area, consult appropriate state extension service, professional consultant or other qualified authority.
- Injury to or loss of desirable trees or vegetation may result if equipment is drained or flushed on or near these trees or vegetation, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- In non-crop areas adjacent to desirable vegetation, avoid overlapping spray applications and shut off spray to the spray boom while starting, turning, slowing or stopping to avoid injury to desirable vegetation.
- Applications made where runoff water flows onto agricultural land may injure or kill crops, such as but not limited to sugar beets, potatoes, tomatoes, tobacco, soybeans, field beans, alfalfa, grapes, peaches, almonds, and vegetables.
- Applications should be made only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible, may seriously injure susceptible plants.
- Exposure to STREAMLINE® HERBICIDE may injure or kill most crops and may injure or kill desirable vegetation. Injury may be more severe when the crops or desirable vegetation are irrigated.
- Caution is advised when using this product in areas where loss of desirable conifer or deciduous trees and/or shrubs as well as other broadleaf plants, including but not limited to, legumes and wild flowers, cannot be tolerated. Without prior experience, it is necessary that small areas containing these plants be tested for tolerance to STREAMLINE® HERBICIDE and its soil residues before any large scale spraying occurs.
- Low rates of STREAMLINE® HERBICIDE can kill or severely injure most crops. Following a STREAMLINE® HERBICIDE application, the use of spray equipment to apply other pesticides to crops on which STREAMLINE® HERBICIDE is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment.
- Leave treated soil undisturbed to reduce the potential for STREAMLINE® HERBICIDE movement by soil erosion due to wind or water.
- In the case of suspected off-site movement of STREAMLINE® HERBICIDE to cropland, soil samples should be quantitatively analyzed for STREAMLINE® HERBICIDE or any other herbicide which could be having an adverse effect on the crop, in addition to conducting the field bioassay.
- STREAMLINE® HERBICIDE may suppress or severely injure certain established grasses, such as some brome grass and wheatgrass species, especially when the grass plants are stressed by adverse environmental conditions. Areas that contain these grass plants should recover as environmental conditions for good grass growth occur.

## FIELD BIOASSAY

To conduct a field bioassay, grow to maturity test strips of the crop you plan to grow the following year. The test strips must cross the entire field including knolls and low areas. Crop response to the field bioassay will indicate whether or not to plant the crops grown in the test strips. If no crop injury (such as poor germination, stunting, or chlorosis, malformation, or necrosis of leaves) or yield loss is evident from the crops grown in the test strips, the intended rotational crop may be planted. If herbicide symptoms or yield loss is observed do not plant the crop.

## TANK MIXTURES

STREAMLINE® HERBICIDE may be tank mixed with other herbicides which are registered for the same use sites, methods of application and timings as specified on this product label. Refer to the tank mix product label for any additional instructions or use restrictions. Include a spray adjuvant with STREAMLINE® HERBICIDE when making postemergence applications. Refer to the adjuvant label for additional instructions or use restrictions. When tank mixing, use the most restrictive label limitations for each of the products being used in the tank mix.

## ADJUVANTS

**Methylated Seed Oils and Vegetable Oils:** A methylated seed oil (MSO) or vegetable oil based adjuvant may provide increased leaf absorption of STREAMLINE® HERBICIDE. Include the MSO or vegetable oil adjuvant at 0.5% to 1% v/v (2 quarts to 1 gallon per 100 gallons of spray solution).

**Non-ionic Surfactants:** Use a non-ionic surfactant at a rate of 0.25% to 1% v/v (0.5 to 1 gallon of surfactant per 100 gallons of spray solution). Surfactant products must contain at least 70% constituents effective as spray additives.

**Crop Oil Concentrate (COC):** Apply petroleum-based crop oil concentrate at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.

- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

## INVERT EMULSIONS

STREAMLINE® HERBICIDE may be applied as an invert emulsion. The spray solution results in an invert (water-in-oil) spray emulsion designed to minimize spray drift and spray run-off, resulting in more herbicide deposited on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions.

## INVASIVE SPECIES MANAGEMENT

This product may be considered for use on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) National Early Detection and Rapid Response (EDRR) System for invasive plants. Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is recommended, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

## WEED RESISTANCE MANAGEMENT

STREAMLINE® HERBICIDE contains the active ingredients metsulfuron-methyl which is a Group 2 Herbicide and aminocyclopyrachlor which is a Group 4 Herbicide based on the mode of action classification system of the Weed Science Society of America. When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected.

Follow the best management practices listed below to delay the development of herbicide resistant weeds.

- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.
- Report any incidence of non-performance of this product against a particular weed species to your Bayer distributor, Bayer representative or call 1-800-331-2867.
- If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.



- To the extent possible, do not allow weed escapes to produce seeds, roots, or tubers.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weeds in the field.
- Use a broad spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program.
- Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.

## **INTEGRATED PEST MANAGEMENT**

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include site scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest systems in your area.

## **PREPARING FOR USE - SITE SPECIFIC CONSIDERATIONS**

Understanding the risks associated with the application of STREAMLINE® HERBICIDE is essential to aid in preventing off-site injury to desirable vegetation and agricultural crops. The risk of off-site movement both during and after application may be affected by a number of site specific factors such as the nature, texture and stability of the soil, the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, drainage patterns, and other local physical and environmental conditions. A careful evaluation of the potential for off-site movement from the intended application site, including movement of treated soil by wind or water erosion, must be made prior to using STREAMLINE® HERBICIDE. This evaluation is particularly critical where desirable vegetation or crops are grown on neighboring land for which the use of STREAMLINE® HERBICIDE is not labeled. If prevailing local conditions may be expected to result in off-site movement and cause damage to neighboring desirable vegetation or agricultural crops, do not apply STREAMLINE® HERBICIDE.

Before applying STREAMLINE® HERBICIDE the user must read and understand all label directions, precautions and restrictions completely, including these requirements for a site specific evaluation. If you do not understand any of the instructions or precautions on the label, or are unable to make a site specific evaluation yourself, consult with your local BAYER CROPSCIENCE LP Crop Protection representative, local agricultural dealer, university cooperative extension service, land manager, professional applicator, agricultural consultant, or other qualified authorities familiar with the area to be treated. If you still have questions regarding the need for site specific considerations please call 1-800-331-2867.



## NON-AGRICULTURAL USES

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Terrestrial non-crop weed control is not within the scope of the Worker Protection Standard. See the Product Information section of this label for a description of noncrop sites. Do not enter or allow others to enter the treated area until sprays have dried.

## APPLICATION INFORMATION

### NON-CROP SITES

STREAMLINE® HERBICIDE is a dispersible granule that is mixed in water and applied as a spray. STREAMLINE® HERBICIDE may be applied broadcast using ground spray equipment, fixed wing aircraft or by helicopter. When applying by fixed wing aircraft or helicopter, follow directions under the Aerial Applications section of this label, otherwise refer to the section on Ground Applications when using surface equipment.

Apply STREAMLINE® HERBICIDE preemergence or early postemergence when broadleaf weeds are actively germinating or growing. For perennial species on the label, a postemergence application must be used. STREAMLINE® HERBICIDE can provide long term control of susceptible weeds. The length of control is dependent upon the application rate, condition and growth stage of target weeds, environmental conditions at and following application, and the density and vigor of competing desirable vegetation. Best results for long term weed and brush control occur when grasses and other desired vegetation are allowed to recover from adverse environmental conditions and compete with undesirable brush or weeds.

Weeds hardened off by cold weather or drought stress may not be controlled.

STREAMLINE® HERBICIDE may also be applied using low and high volume ground spray equipment.

Regardless of the application volume or spray equipment used, thorough coverage of the brush and weed foliage is necessary to optimize control results.

### INDUSTRIAL TURFGRASS

#### (UNIMPROVED ONLY)

##### Application Information

STREAMLINE® HERBICIDE is labeled for selective broadleaf weed control in unimproved, well established industrial and roadside turfgrasses. STREAMLINE® HERBICIDE is also labeled for the control of certain noxious and troublesome weeds in industrial turfgrass. Use a surfactant at the rate of 1 to 2 pints per 100 gallons of spray solution. A transient yellowing and/or stunting may be observed following an application of STREAMLINE® HERBICIDE.

In addition to conventional spray equipment, STREAMLINE® HERBICIDE may also be applied with invert emulsion equipment. When using an invert emulsion, mix the prescribed rate of STREAMLINE® HERBICIDE in the water phase.

For turfgrass species that are not listed on this label, determine the suitability for such uses by treating a small area at a labeled application rate. Prior to treatment of larger areas, the treated area must be observed for any signs of herbicidal injury during 30 days of normal growing conditions to determine if the treatment is safe to the target species. The user assumes the responsibility for any plant damage or other liability resulting from use of STREAMLINE® HERBICIDE on a turfgrass species not listed on this label.

Excessive injury may result when STREAMLINE® HERBICIDE is applied to turfgrass that is under stress from drought, insects, disease, cold temperatures (winter injury) or poor fertility.

TURFGRASS TYPE	RATE OUNCES/ACRE
Bermudagrass	1.75 to 5.0
Bluegrass, Kentucky	1.75 to 5.0
Tall Fescue	1.75 to 5.0
Ryegrass, perennial <sup>1</sup>	1.75 to 3.0
Wheatgrass species <sup>2</sup>	1.75 to 4.75
Smooth brome <sup>2</sup>	1.75 to 4.75

• Transient injury (stunting, yellowing, seedhead suppression) can occur to industrial and roadside turfgrasses from applications of STREAMLINE® HERBICIDE.

• Applications to bermudagrass, Kentucky bluegrass and tall fescue industrial and roadside turfgrasses can cause transient stunting, yellowing and/or seedhead suppression. To reduce these transient symptoms, make application later in the spring after new growth is 4 to 6 inches tall or make application in the fall.

1. Do not apply STREAMLINE® HERBICIDE to this turfgrass species unless potential turfgrass injury can be tolerated. Do not

apply more than 3.0 ounces of STREAMLINE® HERBICIDE per acre. Use surfactant at the rate of 0.5 to 1 pint per 100 gallons of spray solution.

2. For crested and western wheatgrasses and smooth brome the injury (stunting, seedhead suppression) at the higher rates during the season of application may be severe. Areas that contain these turfgrass plants should recover as environmental conditions for good turfgrass growth occur.

### **SPECIFIC WEED PROBLEMS: COGONGRASS**

In roadside turfgrass sites, apply STREAMLINE® HERBICIDE at a minimum of 5 ounces per acre for seedhead suppression of cogongrass. For cogongrass control (stand reduction), apply STREAMLINE® HERBICIDE at 10 to 11 ounces per acre. Multiple applications will be required for best control, not exceeding 11.5 ounces per acre per year. Best results when applied after final seasonal mowing of roadsides. Make applications in the fall prior to frost (applications generally begin in September).

## **BRUSH AND BROADLEAF WEED CONTROL**

### **LOW VOLUME FOLIAR APPLICATION**

See Table 1. STREAMLINE® HERBICIDE Spray Volume and Use Rate Mixing Instructions chart. Adjust the STREAMLINE® HERBICIDE spray concentration according to the spray volume per acre and the size and plant density of the target brush species. For best results, include an MSO adjuvant at the rate of 1% v/v. Good plant coverage is necessary for best results. Use spray nozzles and pressure that will aid the proper deposition of the spray solution. Apply in sufficient spray volume to insure uniform spray distribution of spray particles over the area to be treated and to avoid spray drift. Use the higher concentration rates for dense brush canopies and hard to control brush species.

The application volume required will vary with the height and density of the brush and the type of application equipment. In general, low volume ground application spray volumes range from 20 to 50 gallons per acre.

Ultra-low volume ground application spray volumes may range from 10 to 20 gallons per acre.

For low volume foliar applications, mix 30 to 46 ounces of STREAMLINE® HERBICIDE per 100 gallons of spray solution. Do not apply more than 25 gallons of the spray solution per acre at the 46 ounces per 100 gallon spray solution.

See Table 1. STREAMLINE® HERBICIDE Spray Volume and Use Rate Mixing Instructions chart.

### **HIGH VOLUME FOLIAR APPLICATION**

High volume applications may be applied at rates equivalent to broadcast rates up to 11.5 ounces product per acre per year. Where a rate range is indicated for the brush species, use the higher rate for high density brush sites. For best results, use MSO adjuvant at the rate of 1% V/V to the spray solution.

When making broadcast applications, apply near the tops of the brush plants in a light drizzle pattern. The spray solution must reach the crown of the plants and trickle down into the canopy. Use sufficient spray volume to thoroughly and uniformly wet foliage and stems but don't over apply causing excessive run-off.

**Table 1. STREAMLINE® HERBICIDE Spray Volume and Use Rate Mixing Instructions**

<b>Total Spray Volume gallons/acre</b>	<b>STREAMLINE® HERBICIDE 4.75 ounces/100 gallons of spray</b>	<b>STREAMLINE® HERBICIDE 7.5 ounces/acre ounces/100 gallons of spray</b>	<b>STREAMLINE® HERBICIDE 9.5 ounces/acre ounces/100 gallons of spray</b>	<b>STREAMLINE® HERBICIDE *11.5 ounces/acre ounces/100 gallons of spray</b>
400	1.19	1.88	2.38	2.88
300	1.6	2.5	3.2	3.83
200	2.38	3.75	4.75	5.75
100	4.75	7.5	9.5	11.5
75	6.33	10	12.7	15.3
50	9.5	15	19	23
40	12	18.75	23.75	28.75
30	15.8	25	31.7	38.3
25	19	30	38	46
20	23.75	37.5	47.5	57.5
15	31.7	50	63.3	76.7
10	47.5	75	95	115

\* Do not exceed the maximum use rate of 11.5 ounces per acre per year.

The application volume required will vary with the height and density of the brush and the type of application equipment. High volume ground application spray volumes may range from 100 to 400 gallons per acre.

Depending on the rate of product mixed, do not exceed the total spray volume (gallons per acre) in Table 1. For example, if a rate of 9 ounces per acre is needed and is to be applied at a total spray volume of up to 200 gallons per acre, mix at the rate of 4.5 ounces per 100 gallons of water.

See Table 1. STREAMLINE® HERBICIDE Spray Volume and Use Rate Mixing Instructions chart.

## SPOT APPLICATION

Small area backpack applications (spot applications) for broadleaf weed control may be applied at rates equivalent to the broadcast application rate up to a maximum of 11.5 ounces product per acre per year. Use sufficient spray volume to thoroughly and uniformly wet target weed or brush foliage. Do not apply more than 11.5 ounces product per broadcast acre per year as a result of broadcast, spot or repeat applications.

See Table 2. Small Area - Spot Spray Rate Chart for rates of STREAMLINE® HERBICIDE needed for small area backpack applications. Application rates are based on 1 gallon of spray solution covering 1750 square feet.

**Table 2. SMALL AREA – SPOT SPRAY RATE CHART**

<b>Broadcast Rate Ounces per Acre</b>	<b>Amount of STREAMLINE® HERBICIDE needed per 5 gallons of Spray Solution</b>	
	<b>STREAMLINE® HERBICIDE per 5 gallons of Spray Solution</b>	
	<b><u>Ounces</u></b>	<b><u>Grams</u></b>
1.75	0.35	10
2.5	0.5	14.2
4.5	0.9	25.5
4.75	0.95	27
6.0	1.2	34
7.5	1.5	42.6
9.5	1.9	54
11.5	2.3	65.3

## BROADLEAF WEEDS CONTROLLED

Use the higher spray volumes, herbicide and adjuvant rates for heavy weed infestations and hard to control species.

### 1.75 to 4.5 Ounces per Acre

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Aster	<i>Aster sp.</i>
Bahiagrass	<i>Paspalum notatum</i>
Beebalm	<i>Monarda sp.</i>
Bittercress	<i>Cardamine sp.</i>
Blackeyed-susan	<i>Rudbeckia hirta</i>
Buttercup, bur	<i>Ranunculus testiculatus</i>
Carrot, wild	<i>Daucus carota</i>
Catchfly, conical	<i>Silene conica</i>
Chamomile, false	<i>Matricaria maritima</i>
Chickweed, common	<i>Stellaria media</i>
Chicory	<i>Cichorium intybus</i>
Clover	<i>Trifolium sp.</i>
Clover, sweet	<i>Melilotus alba</i>
Cocklebur	<i>Xanthium sp.</i>
Cockle, corn	<i>Agrostemma githago</i>
Cockle, cow	<i>Vaccaria hispanica</i>
Coreopsis, plains	<i>Coreopsis tinctoria</i>
Crazyweed, silky	<i>Oxytropis sericea</i>
Croton, woolly	<i>Croton capitatus</i>
Dandelion	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Falseflax, smallseed	<i>Camelina microcarpa</i>
Fiddleneck, tarweed	<i>Amsinckia lycopsoides</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Fleabane, rough	<i>Erigeron strigosus</i>
Flixweed	<i>Descurainia sophia</i>
Garlic, wild	<i>Allium canadense</i>
Goldenrod	<i>Solidago sp.</i>
Groundsel, common	<i>Senecio vulgaris</i>
Lambsquarters	<i>Chenopodium album</i>
Lettuce, miners	<i>Claytonia perfoliata</i>
Lettuce, wild	<i>Lactuca virosa</i>
Mustard, blue	<i>Chorispora tenella</i>
Mustard, treacle	<i>Erysimum Cheiranthoides</i>
Mustard, tumble	<i>Sisymbrium altissimum</i>
Mustard, wild	<i>Sinapis arvensis</i>
Pennycress, field	<i>Thlaspi arvense</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Purslane, common	<i>Portulaca oleracea</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sneezeweed, bitter	<i>Helenium amarum</i>
Sorrel	<i>Rumex sp.</i>
Sowthistle, annual	<i>Sonchus oleraceus</i>
Sunflower, Maximilian	<i>Helianthus maximiliani</i>
Tansymustard	<i>Descurainia pinnata</i>
Vetch, crown	<i>Coronilla varia</i>
Yankee weed	<i>Eupatorium compositifolium</i>
Yarrow, common	<i>Achillea millefolium</i>

### 4.75 to 9.5 Ounces per Acre

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Arrowgrass, seaside	<i>Triglochin maritima</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Caraway, wild	<i>Carum carvi</i>
Cinquefoil, sulphur	<i>Potentilla recta</i>
Crupina, common	<i>Crupina vulgaris</i>
Daisy, oxeye	<i>Leucanthemum vulgare</i>
Dock, curly	<i>Rumex crispus</i>
Dyer's woad	<i>Isatis tinctoria</i>
Fern, old world climbing	<i>Lygodium microphyllum</i>
Gaillardia, rosering	<i>Gaillardia puchella</i>
Greasewood	<i>Sarcobatus vermiculatus</i>
Gumweed, curlycup	<i>Grindelia cuneifolia</i>
Halogeton	<i>Halogeton glomeratus</i>
Hawkweed, orange	<i>Hieracium aurantiacum</i>
Hemlock, poison	<i>Conium maculatum</i>
Henbane, black	<i>Hyoscyamus niger</i>
Henbit	<i>Lamium amplexicaule</i>
Honeysuckle	<i>Lonicera sp.</i>
Houndstongue	<i>Cynoglossum officinale</i>
Iris, wild	<i>Iris missouriensis</i>

Ironweed, tall  
 Knapweed, diffuse  
 Knapweed, Russian<sup>2</sup>  
 Knapweed, spotted  
 Knotweed, prostrate  
 Kochia (up to 6" height)<sup>1</sup>  
 Lespedeza, sericea  
 Lettuce, prickly  
 Locust, honey  
 Loosestrife, purple  
 Lupine  
 Maretail/horseweed  
 Mullein, common  
 Mullein, turkey  
 Mustard, garlic  
 Pepperweed, perennial  
 Plantain  
 Plantain, buckhorn  
 Poison-ivy, eastern  
 Ragweed, common  
 Ragweed, western  
 Ragwort, tansy  
 Salsify  
 Salsify, western  
 Scabious, purple  
 Scouringrush  
 Skeletonweed, rush<sup>2</sup>  
 Snakeweed, broom  
 Sowthistle, common  
 Spurge, leafy  
 St. John'swort  
 Starthistle, yellow  
 Sunflower, common  
 Tansy, common  
 Teasel, common  
 Thistle, bull  
 Canada  
 cotton  
 Thistle, musk  
 Thistle, plumeless  
 Thistle, Russian  
 Thistle, Scotch  
 Toadflax, dalmatian  
 Toadflax, yellow<sup>3</sup>  
 Whitetop (hoary cress)

*Vernonia gigantea*  
*Centaurea diffusa*  
*Centaurea repens*  
*Centaurea biebersteinii*  
*Polygonum aviculare*  
*Kochia scoparia*  
*Lespedeza cuneata*  
*Lactuca serriola*  
*Gleditsia triacanthos*  
*Lythrum salicaria*  
*Lupinus sp.*  
*Conyza canadensis*  
*Verbascum thapsus*  
*Croton setigerus*  
*Alliaria petiolata*  
*Lepidium latifolium*  
*Plantago sp.*  
*Plantago lanceolata*  
*Toxicodendron radicans*  
*Ambrosia artemisiifolia*  
*Ambrosia psilostachya*  
*Senecio jacobaea*  
*Tragopogon sp.*  
*Tragopogon dubius*  
*Scabiosa columbaria*  
*Equisetum hyemale*  
*Chondrilla juncea*  
*Gutierrezia sarothrae*  
*Sonchus oleraceus*  
*Euphorbia esula*  
*Hypericum perforatum*  
*Centaurea solstitialis*  
*Helianthus annuus*  
*Tanacetum vulgare*  
*Dipsacus fullonum*  
*Cirsium vulgare* Thistle,  
*Cirsium arvense* Thistle,  
*Onopordum acanthium*  
*Carduus nutans*  
*Carduus acanthoides*  
*Salsola iberica*  
*Onopordum acanthium*  
*Linaria dalmatica*  
*Linaria vulgaris*  
*Cardaria draba*

### **7.5 to 11.5 Ounces per Acre**

Broom, Scotch  
 Larkspur, duncecap  
 Larkspur, tall  
 Parsnip, wild

*Cytisus scoparius*  
*Delphinium occidentale*  
*Delphinium glaucum*  
*Pastinaca sativa*

1-See specific weed directions.

2-In western US, apply in fall at rosette stage

3-Suppression: a visual reduction in weed competition (reduced population or vigor) as compared to an untreated area.

### **Specific Weed Directions:**

Kochia: For non-selective applications, tankmixing glyphosate with STREAMLINE® HERBICIDE may improve control under dry conditions.

**BRUSH CONTROLLED:** Use the higher spray volumes, herbicide and adjuvant rates for heavy weed and brush infestations, hard to control species and dense hardwood canopies.

Thorough spray coverage of all brush foliage is necessary for best control.

Do not exceed 11.5 ounces broadcast per acre per year.

#### STREAMLINE® HERBICIDE

BRUSH		Rate High Volume Foliar ounces/100 gallon	Rate Broadcast Foliar ounces/acre
Ash	<i>Fraxinus sp.</i>	7.5 - 11.5	9.5 - 11.5
Aspen	<i>Populus sp.</i>	7.5 - 11.5	9.5 - 11.5
Baccharis, eastern	<i>Baccharis halimifolia</i>	7.5 - 11.5	9.5 - 11.5
Black locust	<i>Robinia pseudoacacia</i>	7.5 - 11.5	9.5 - 11.5
Black Tupelo	<i>Nyssa sylvatica</i>	7.5 - 11.5	9.5 - 11.5
Boxelder	<i>Acer negundo</i>	7.5 - 11.5	9.5 - 11.5
Camelthorn	<i>Acacia erioloba</i>	7.5 - 11.5	9.5 - 11.5
Cherry	<i>Prunus sp.</i>	7.5 - 11.5	9.5 - 11.5
Cottonwood	<i>Populus sp.</i>	7.5 - 11.5	9.5 - 11.5
Elderberry	<i>Sambucus sp.</i>	7.5 - 11.5	9.5 - 11.5
Elm	<i>Ulmus sp.</i>	7.5 - 11.5	9.5 - 11.5
Gorse, common	<i>Ulex europaeus</i>	7.5 - 11.5	9.5 - 11.5
Hackberry	<i>Celtis occidentalis</i>	7.5 - 11.5	9.5 - 11.5
Hawthorn	<i>Crataegus sp.</i>	7.5 - 11.5	9.5 - 11.5
Honeysuckle	<i>Lonicera sp.</i>	7.5 - 11.5	9.5 - 11.5
Maple, red	<i>Acer rubrum</i>	7.5 - 11.5	9.5 - 11.5
Maple, silver	<i>Acer sacharinum</i>	7.5 - 11.5	9.5 - 11.5
Mesquite	<i>Prosopis glandulosa</i>	7.5 - 11.5	9.5 - 11.5
Mulberry	<i>Morus sp.</i>	7.5 - 11.5	9.5 - 11.5
Ocean spray	<i>Holodiscus sp.</i>	7.5 - 11.5	9.5 - 11.5
Osage orange	<i>Maclura pomifera</i>	7.5 - 11.5	9.5 - 11.5
Persimmon, common	<i>Diospyros virginiana</i>	7.5 - 11.5	9.5 - 11.5
Snowberry	<i>Symphoricarpos sp.</i>	7.5 - 11.5	9.5 - 11.5
Sugarberry	<i>Celtis laevigata</i>	7.5 - 11.5	9.5 - 11.5
Sumac	<i>Rhus sp.</i>	7.5 - 11.5	9.5 - 11.5
Sycamore	<i>Acer pseudoplatanus</i>	7.5 - 11.5	9.5 - 11.5
Tallow, Chinese	<i>Sapium sebiferum</i>	7.5 - 11.5	9.5 - 11.5
Tree of heaven	<i>Ailanthus altissima</i>	7.5 - 11.5	9.5 - 11.5
Willow	<i>Salix sp.</i>	7.5 - 11.5	9.5 - 11.5
Yellow poplar	<i>Liriodendron tulipifera</i>	7.5 - 11.5	9.5 - 11.5
Cedar, Eastern red <sup>2</sup>	<i>Juniperus virginiana</i>	9.5 - 11.5	11.5
Firs	<i>Abies sp.</i>	9.5 - 11.5	11.5
Huisache	<i>Acacia farnesiana</i>	9.5 - 11.5	11.5
Oaks	<i>Quercus sp.</i>	9.5 - 11.5	11.5
Pine, loblolly	<i>Pinus taeda</i>	9.5 - 11.5	11.5
Pine, Virginia <sup>3,4</sup>	<i>Pinus virginia</i>	9.5 - 11.5	11.5
Privet, Chinese	<i>Ligustrum sinense</i>	9.5 - 11.5	11.5
Rabbitbrush, rubber	<i>Ericameria nauseosa</i>	9.5 - 11.5	11.5
Sassafras	<i>Sassafras albidum</i>	9.5 - 11.5	11.5
Spruce, black	<i>Picea mariana</i>	9.5 - 11.5	11.5
Spruce, white	<i>Picea glauca</i>	9.5 - 11.5	11.5
Sweetgum <sup>3,4</sup>	<i>Liquidambar styraciflua</i>	9.5 - 11.5	11.5
<b>VINES and BRIARS</b>			
Blackberry	<i>Rubus sp.</i>	7.5 - 11.5	9.5 - 11.5
Dewberry	<i>Rubus trivialis</i>	7.5 - 11.5	9.5 - 11.5
Grape, wild	<i>Vitis rotundifolia</i>	7.5 - 11.5	9.5 - 11.5
Kudzu <sup>1</sup>	<i>Pueraria montana</i>	7.5 - 11.5	9.5 - 11.5
Multiflora rose	<i>Rosa multiflora</i>	7.5 - 11.5	9.5 - 11.5
Salmonberry	<i>Rubus spectabilis</i>	7.5 - 11.5	9.5 - 11.5
Thimbleberry	<i>Rubus parviflorus</i>	7.5 - 11.5	9.5 - 11.5
Wild roses	<i>Rosa sp.</i>	7.5 - 11.5	9.5 - 11.5

1 - For best control multiple year applications may be necessary.

2 - For best control use high volume foliar applications.

3 - Suppression: a visual reduction in weed competition (reduced population or vigor) as compared to an untreated area.

4 - See specific weed section.

#### Specific Weed Directions:

**Virginia Pine:** For complete control tankmix "Krenite" at 1.5 gallons per acre or glyphosate at 5.4 pounds active ingredient per acre (1 gallon of a 5.4 pound per gallon material or 1.33 gallons of a 4 pound per gallon material)

**Sweetgum:** For complete control tankmix "Krenite" at 1.5 gallons per acre or glyphosate at 5.4 pounds active ingredient per acre (1 gallon of a 5.4 pound per gallon material or 1.33 gallons of a 4 pound per gallon material)

## SPRAY EQUIPMENT

Low rates of STREAMLINE® HERBICIDE can kill or severely injure most crops. Following a STREAMLINE® HERBICIDE application, the use of spray equipment to apply other pesticides to crops on which STREAMLINE® HERBICIDE is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment.

### Ground

Use a sufficient volume of water to ensure thorough coverage when applying STREAMLINE® HERBICIDE as a broadcast or directed spray.

Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping to avoid injury to desired species.

### Air

STREAMLINE® HERBICIDE may be applied by either fixed wing aircraft or helicopter spray equipment. However, do not make application by air unless appropriate buffer zones can be maintained to minimize potential spray drift out of the target areas.

Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Be sure the sprayer is calibrated. Avoid overlapping and shut off spray booms while starting, turning or slowing to avoid injury to desired species.

The application volume required will vary with the height and density of the brush and the type of application equipment. In general, aerial application spray volumes range from 15 to 25 gallons per acre.

## MIXING INSTRUCTIONS

1. Fill the tank 1/3 to 1/2 full of water.
2. While agitating, add the required amount of STREAMLINE® HERBICIDE.
3. Continue agitation until the STREAMLINE® HERBICIDE is fully dispersed, at least 5 minutes.
4. Once the STREAMLINE® HERBICIDE is fully dispersed, maintain agitation and continue filling tank with water. STREAMLINE® HERBICIDE must be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) and then add the necessary volume of spray adjuvants. Always add spray adjuvants last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply STREAMLINE® HERBICIDE spray mixture within 24 hours of mixing to avoid product degradation.
8. If STREAMLINE® HERBICIDE and a tank mix partner are to be applied in multiple loads, pre-slurry STREAMLINE® HERBICIDE in clean water prior to adding it to the tank. This will prevent the tank mix partner from interfering with the dissolution of the STREAMLINE® HERBICIDE.

## SPRAYER CLEANUP

Thoroughly clean all mixing and spray equipment following applications of STREAMLINE® HERBICIDE as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water.
  2. Fill the tank with clean water and 1 gallon of household ammonia (contains 3% active) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank.
- Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.

Equivalent amounts of an alternate-strength ammonia solution or a commercial cleaner can be used in the cleanup procedure. If a commercial cleaner is used, carefully read and follow the individual cleaner instructions.

3. Remove the nozzles and screens and clean separately in bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. Dispose of the rinsate on a labeled site or at an approved waste disposal facility. If a commercial cleaner is used follow the directions for rinsate disposal on the label.

Caution: Do not use chlorine bleach with ammonia as dangerous gases will form. Do not clean equipment in an enclosed area.



**Notes:**

1. Always start with a clean spray tank.
2. Steam-cleaning spray tanks may be necessary to facilitate the removal of any caked deposits.
3. When STREAMLINE® HERBICIDE is tank mixed with other pesticides, all cleanout procedures for each product must be examined and the most rigorous procedure must be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products must be followed as per the individual labels.

**SPRAY DRIFT MANAGEMENT**Aerial Applications:

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or target vegetation unless making an industrial turf application, in which case applicators may apply with a nozzle height no more than 4 feet above the crop or target vegetation.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

**SPRAY DRIFT ADVISORIES**Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

**IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

**Controlling Droplet Size – Ground Boom**

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **Controlling Droplet Size – Aircraft**

- **Adjust Nozzles** - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

### **BOOM HEIGHT – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

### **WIND**

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

### **SENSITIVE AREAS**

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

### **DRIFT CONTROL ADDITIVES**

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

## **STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** Store product in original container only. Store in a cool, dry place.

**Pesticide Disposal:** Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refer to the Net Contents section of this product's labeling for the applicable "Refillable Container" or "Nonrefillable Container" designation.

**Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with STREAMLINE® HERBICIDE containing aminocyclopyrachlor and metsulfuron-methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with STREAMLINE® HERBICIDE containing aminocyclopyrachlor and metsulfuron-methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact BAYER CROPSCIENCE LP at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact BAYER CROPSCIENCE LP at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the

container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact BAYER CROPSCIENCE LP at 1-800-334-7577, day or night.

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## CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, plant injury, other property damage, as well as other unintended consequences may result because of factors beyond the control of Bayer CropScience LP. Those factors include, but are not limited to, weather conditions, presence of other materials or the manner of use or application. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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### PRODUCED FOR



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STREAMLINE HERBICIDE (Pending) 10/22/2017, 10/26/2017, 11/6/2017, 09/26/2018, 10/04/2018, 03/06/2019, 01/14/2020, 01/21/2020

**For product information call: 1-800-331-2867**